

**CLAIMS:**

What is claimed is:

1. A method for providing metadata, comprising:
  - 5 creating an object descriptor class for an object;
  - providing an object descriptor interface using the object descriptor class;
  - using methods defined by the object descriptor interface to identify a property of the object;
  - 10 creating a property descriptor class for the property of the object;
  - providing a property descriptor interface using the property descriptor class; and
  - 15 using methods defined by the property descriptor interface to obtain metadata associated with the property.
2. The method of claim 1, wherein the object descriptor interface extends a property set descriptor interface.
3. The method of claim 2, wherein the property set descriptor interface contains the property descriptor interface.
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4. The method of claim 1, wherein the property descriptor interface defines methods that describe a single property.
5. The method of claim 1, wherein the object descriptor interface collects multiple associated property descriptions into a single object description.
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6. The method of claim 1, wherein the object is a database.

7. The method of claim 6, wherein the step of using methods defined by the object descriptor interface to 5 identify a property of the object comprises using application program interfaces that talk to the database.

8. The method of claim 1, wherein the object is a Java bean.

9. The method of claim 8, wherein the step of using 10 methods defined by the object descriptor interface to identify a property of the object comprises using a built-in object introspection mechanism.

10. A method for providing metadata about a set of properties comprising:

15 creating a first object describing metadata for a plurality of data sources, wherein the first object stores a related set of properties; and

creating a set of second objects describing metadata for respective properties of the data sources;

20 wherein dynamically defined metadata concerning a respective property is obtained by invoking a method in a respective one of the second objects.

11. The method of claim 10, wherein the first object and the set of second objects comprise interface objects.

12. The method of claim 10, wherein each object in the set of second objects defines methods that describe a single property of a data source.

13. The method of claim 10, wherein the first object 5 collects multiple associated property descriptions into a single description.

14. An apparatus for providing metadata, comprising:  
first creation means for creating an object descriptor class for an object;

10 first implementation means for providing an object descriptor interface using the object descriptor class;

first exposing means for using methods defined by the object descriptor interface to identify a property of the object;

15 second creation means for creating a property descriptor class for the property of the object;

second implementation means for providing a property descriptor interface using the property descriptor class; and

20 second exposing means for using methods defined by the property descriptor interface to obtain metadata associated with the property.

15. The apparatus of claim 14, wherein the object descriptor interface extends a property set descriptor 25 interface.

16. The apparatus of claim 15, wherein the property set descriptor interface contains the property descriptor interface.

17. The apparatus of claim 14, wherein the property descriptor interface defines methods that describe a single property.

18. The apparatus of claim 14, wherein the object  
5 descriptor collects multiple associated property descriptions into a single object description.

19. The apparatus of claim 14, wherein the object is a database.

20. The apparatus of claim 19, wherein the first  
10 exposing means comprises means for using application program interfaces that talk to the database.

21. The apparatus of claim 14, wherein the object is a Java bean.

22. The apparatus of claim 21, wherein the first  
15 exposing means comprises means for using a built-in object introspection mechanism.

23. An interface for defining metadata about a related set of properties comprising:

20 a first object describing metadata for a plurality of data sources, wherein the first object stores a related set of properties; and

25 a set of second objects describing metadata for respective properties of the data sources.

24. The interface of claim 23, wherein the first object and the set of second objects comprise interface objects.

25. The interface of claim 23, wherein each object in the set of second objects defines methods that describe a 5 single property of a data source.

26. The interface of claim 23, wherein the first object collects multiple associated property descriptions into a single description.

27. A computer program product, in a computer readable 10 medium, for defining metadata, comprising:

instructions for creating an object descriptor class for an object;

instructions for providing an object descriptor interface using the object descriptor class;

15 instructions for using methods defined by the object descriptor interface to identify a property of the object;

instructions for creating an property descriptor class for the property of the object;

20 instructions for providing a property descriptor interface using the property descriptor class; and

instructions for using methods defined by the property descriptor interface to obtain metadata associated with the property.